



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,585	02/13/2001	Malcolm James Grieve	DP-302896	9475
22851	7590	11/14/2007	EXAMINER	
DELPHI TECHNOLOGIES, INC.			MERKLING, MATTHEW J	
M/C 480-410-202			ART UNIT	PAPER NUMBER
PO BOX 5052			1797	
TROY, MI 48007				
MAIL DATE		DELIVERY MODE		
11/14/2007		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/782,585	GRIEVE, MALCOLM JAMES	
Examiner	Art Unit		
Matthew J. Merkling	1797		

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 10 September 2007.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 6,8,10 and 16 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 6,8,10 and 16 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/10/07.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date.       .  
5)  Notice of Informal Patent Application  
6)  Other:       .

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/10/07 has been entered.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 6, 8, 10 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anumakonda et al. (US 6,221,280).

Regarding claims 16 and 6, Anumakonda discloses a fuel reformer system (partial oxidation reformer, see abstract), comprising:

a housing (13) having an inlet (19) and an outlet (20);

a mat material (radiation shield, 16, such as zirconia, col. 10 lines 24-31) fluidly coupled to and downstream of said inlet (see Fig. 2), said mat material comprising a ceramic fibrous material (col. 10 lines 27-30) and having a reflective surface facing the inlet that provides a mixing zone fluidly coupled to said mat material (see Fig. 2); and

a reforming zone (reaction zone, 17) downstream of said mat material and mixing zone (see Fig. 2), comprising a reformer catalyst substrate and a reformer catalyst (18, col. 11 lines 1-3).

While Anumakonda discloses a ceramic fibrous material upstream of the reforming zone, as set forth above, Anumakonda does not disclose a plurality of layers of the ceramic fibrous material. However, providing multiple fibrous ceramic layers would amount to a mere duplication of parts. It has been held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Regarding claim 8, Anumakonda, as discussed in claim 16 above, further discloses the ceramic fibrous material is held together by a ceramic substance (i.e. the material is a ceramic substance, col. 10 lines 27-31)

Regarding claim 10, Anumakonda, as discussed in claim 16 above, further discloses said reflective surface comprises a coating of zirconia comprises a white opaque material (col. 8 lines 20-29). Furthermore, it is well known in the art that metallic oxides such as zirconia inherently have white opaque coloration (See Weinrich, USP 2,628,921).

5. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller et al. (US 6,579,510).

Regarding claims 16 and 6, Keller discloses a fuel reformer system (partial oxidation reformer, see abstract), comprising:

a housing having an inlet and an outlet (see Fig. 1);  
a mat material (thermal radiation barrier, 22, col. 6 lines 47-51) fluidly coupled to and downstream of said inlet (see Fig. 1), said mat material comprising a ceramic fibrous material (col. 6 lines 47-51) and having a reflective surface facing the inlet that provides a mixing zone (19) fluidly coupled to said mat material (see Fig. 1); and  
a reforming zone (catalytic device, 24) downstream of said mat material and mixing zone (see Fig. 1), comprising a reformer catalyst substrate and a reformer catalyst (col. 7 lines 44-47).

While Keller discloses a ceramic fibrous material upstream of the reforming zone, as set forth above, Keller does not disclose a plurality of layers of the ceramic fibrous material. However, providing multiple fibrous ceramic layers would amount to a mere duplication of parts. It has been held that mere

duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

**Response to Arguments**

6. Applicant's arguments and amendments filed 9/10/07, with respect to the rejection(s) of claim(s) 6, 8, 10 and 16 under 35 USC §103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Anumakonda et al. (US 6,221,280) and Keller et al. (US 6,579,510).

**Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J. Merkling whose telephone number is (571) 272-9813. The examiner can normally be reached on M-F 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Calderola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



MJM



Gienn Caldaroia  
Supervisory Patent Examiner  
Technology Center 1700